



## 20<sup>th</sup> Anniversary of 9-11: Corporate Disaster Preparedness, Lessons Learned, and Ways Forward

Stefane Kabene<sup>1</sup>, Said Baadel<sup>1</sup>

*1 Canadian University Dubai, United Arab Emirates.*

Received: June 15, 2021, Revised July 20, 2021, Published: August 10, 2021

### ARTICLE INFO

**Keywords:**

Corporate Commitment; Crisis Management; Corporate Disaster Preparedness; Two-tier Strategy

### ABSTRACT

This paper deals with security crisis and disaster management and some effective approaches companies should take to deal with these issues. The paper is based on selected interviews of some of the leading multinational companies in North America namely: American Express, Husky Injection Moulding Systems Ltd., and Johnson & Johnson with the aim of learning from their experience on how they dealt with their crisis situations in real life post September 11 events. The companies differed in size or the type of crisis they experienced yet there were similar underlying themes that led to their successful recovery. Two-tier strategy that focused on different aspects of the business, a flexible contingency plan, a training program, an effective backup communication system, and a strong commitment to disaster preparedness in the corporate culture all contributed to their disaster management plans. It is our hope that this paper can provide guidance to HR and corporate management upon experiencing a disaster, an opportunity to learn, prepare, and respond effectively and efficiently to mitigate crisis through the lessons learnt from these three multinational corporations.

### 1. INTRODUCTION AND BACKGROUND

There has been a disturbing rise of international terrorism in the last decade and a half. September 11, 2001 was the most visible and damaging example of this trend. The bombing of the Federal Building in Oklahoma City, the London and Madrid Train bombings, the Norwegian terror attack in 2011, Paris attack in 2015 followed by the Brussels bombing in 2016 and continuous ones in Ankara and Istanbul, are also evidence of this trend. These events have all had dramatic effects. However, September 11 forced a fundamental change in business continuity operations, as companies were forced to deal with the realities of a large-scale disaster.

In recent years there has seemingly been an increase in the occurrence of natural disasters as well. The devastating tsunami in 2005, hurricanes Katrina, hurricane Sandy of 2012 etc. illustrate the havoc natural disasters can cause. Businesses in the Gulf of Mexico have dealt with hurricanes for some time and have become quite capable at dealing with them. The outcomes of these types of events are hard to predict, and therefore very challenging to deal with. There should be a key focus on incorporating the Human Resource department into the planning process. Poor planning will certainly have significant

negative impact not only to the disaster victims but also to their families and relief agencies (Hartwell, 2014). People are the most critical element of business continuity, and Human Resource management should be directly involved in all aspects of crisis management.

Disasters are dynamic situations that require dynamic people in place to respond and react to them. Organizations need to have detailed planning, and extensive training. Organizations that are not prepared to deal with disaster stand less chance of survival in the modern business world.

Disasters are outcomes resulting from the interaction of extreme natural and/or human events (Pallyaguru, et al, 2008; O'Brian, et al, 2010). There are an infinite number of potential threats or disasters in the world and attempting to plan for everything would be impossible. These disasters are almost impossible to predict in advance, thus proving a significant challenge to governments, corporations, and small businesses (Beamon & Kotleba, 2006).

Some of the critical activities in a disaster management lifecycle include preparedness, response, rehabilitation, and mitigation (Carter, 1992; Tomasini & Van Wassenhove, 2009). Raising public awareness through disaster education can raise the level of preparedness and

help equip people with information on how to help them keep clear of harm's way when faced with such threats in order to reduce human suffering during disasters and other catastrophic events (Kapuchi, 2008; Sinha, et al., 2008).

Responding to a crisis is typically time-sensitive and happens immediately after a crisis occurs. It is imperative to mobilize all necessary personnel that are trained to deal with disasters in a significantly short time frame. Logistics need to focus on how to save lives and alleviate human suffering fast before shifting to efficiency and how to optimize available resources (Ben-Tal, et al., 2011). The process of rehabilitation focuses primarily on returning life to normalcy, restoration, and protecting against the effects of any perceived future disasters (Loh, 2005; Nikbaksh & Farahani, 2011).

Upon experiencing a disaster, an opportunity to learn, prepare, and respond effectively and efficiently to mitigate future crisis is provided. These mitigation activities can significantly minimize human casualties and suffering and lessen any future potential economic losses should another disaster occur (Pallyaguru & Amarantunga, 2008).

The role of HR department is generally perceived to be the facilitation of payroll and benefits systems while considering the employee needs and wellbeing. While these functions remain important, the overall role of HR is changing and widening in scope; consequently, their role in crisis management situations must change as well. One of the trends identified during the relief efforts for several of the most recent major crises, is that HR professionals are being brought in to head relief teams. Less than 48 hours after Hurricane Katrina struck, the Louisiana government realized they could not respond to the crisis. They contacted Rod McCowan, an HR specialist from Hitachi Data Systems, to create and coordinate the response of the Federal, State and local governments, as well as the private disaster relief groups (Leonard, 2006). The presence of a skilled Human Resource manager, such as McCowan, introduced some of the key skill sets required to handle a disaster. Lockwood stresses that "one of HR's strategic roles is to focus on leadership qualities, such as strategic thinking, communication, empowerment, trust and integrity, when considering succession planning for crisis management". For these reasons, it is becoming crucial that organizations place more responsibility on Human Resources to plan for and respond to organizational emergencies.

What are some of the problems associated with implementing a crisis or continuity plan? Legal issues, communication, and manpower can be major obstacles to successful crisis management. If there is a leadership void, or lack of executive support, the success of any crisis management plan will suffer greatly. There are many operational constraints that come into play during a crisis or disaster that make timely and appropriate task assignment and sequencing very difficult. Precedence

constraints, resource availability, and critical deadlines among others make it incumbent to assign personnel in an efficient and effective manner. Failure to do so may result in unnecessary fatalities and loss of property.

While HR professionals cannot predict the future or what is going to affect their business, they can help through identifying the most critical issues that could influence the workforce (Hartwell, 2014). Therefore, organizations must identify which situations are most likely to affect them, and plan accordingly. In this paper, we mention three large multinational corporations' strategies used in their real-life experience of crisis in the past and draw lessons learnt from them. It is our hope that this paper can provide guidance to HR and corporate management upon experiencing a disaster, an opportunity to learn, prepare, and respond effectively and efficiently to mitigate crisis through the lessons learnt.

The rest of the paper is organized as follows: Section 2 discusses the methodology used. In section 3, we present the responses from the interviews conducted followed by discussions and best practices in the HR on disaster preparedness. Section 4 concludes our survey and provides some insights going forward.

## 2. METHODOLOGY

Whether referred to as a business continuity plan, or a corporate security plan, the general responsibilities of crisis management fall on the Human Resource department to ensure that the organization's employees are working in a safe environment and have adequate training in how to respond should a crisis arise. In the event that a disaster should occur, it will also fall on the HR department to locate employees, ensure they are safe, and arrange for counselling and recovery programs. There may be situations in which a business cannot access their headquarters, and must operate from a new location, or remotely. In this case the HR department may be responsible for facilitating the transfer.

Due to the unpredictable nature of crises, both man-made and natural, it is imperative for organizations to have an effective strategy that focuses on employee safety, as well as business continuity. In order to analyze how different companies manage crisis situations, interviews were conducted with three large multi-national corporations; American Express Corp., Husky Injection Moulding Systems Ltd., and Johnson & Johnson. The interviews consisted of a multi-part survey aimed at examining the three key functions of crisis management; Planning, Reaction, and Learning (Exhibit 1). It is understood that this topic is emotionally charged, and can relate to an organization's security, thus no information regarding organizational security protocols or proprietary information was requested.

### 3. RESULTS

#### A) American Express Corp., New York

American Express is an organization that knows all too well the importance of crisis management. The company's headquarters at the World Financial Center in New York City sustained heavy damages, and were inaccessible for several months, as a result of the terrorist attacks on September 11, 2001. As American Express is a company that has a strong crisis management program in place, they were prepared to deal with such an event better than most. Moving forward, the company has also been successful at implementing key learning's, and continually revising and improving their crisis management plans. The following findings were drawn from an interview with Ryan Costello, former Corporate Safety Manager at American Express (currently Manager of Global Safety Strategy and Programs).

#### 1.0 Prevention:

*A. Does your organization have a comprehensive emergency response plan?*

Yes. American Express has a 2-tiered comprehensive Business Continuity Plan in place.

*B. What kind of situation is the plan aimed at preventing and responding to?*

The plan is not specific. It is aimed at any general threats which could restrict or block access to the building.

*C. How does your organization train employees in emergency response?*

American Express conducts crisis response training to all new hires. The company also conducts on-going crisis preparation training. Fire drills are conducted every 6 months, and a full-scale building evacuation drill is held annually.

*D. Does your organization have a formal Crisis Management team?*

Yes. There are two teams: The Crisis Response team and the Crisis Management team. The Response team is made up of 10-15 employees from the Safety department, HR, the different business units, and Security. The Response team deals with the immediate issues such as an employee 'role-call' in the event of a crisis. The Crisis

Management team is at the executive level and deals more with the business continuity issues. The teams meet every month. During a crisis, such as the recent NYC Transit strike, the teams meet daily.

#### 2.0 Reaction

*A. Has your organization faced a large-scale emergency or crisis that threatened the safety of employees or the company's ability to carry out day-to-day operations?*

*B. How prepared was your organization to respond to the crisis?*

Yes. The biggest being the 9/11 terrorist attacks, and more recently the NYC Transit strike.

American Express is very well prepared to deal with crises. The company has had a robust Continuity plan in place since the early 1990's. The events of 9/11 brought issues to the forefront, but there are also other threats such as the recent hurricanes, as well as the NYC blackout.

*C. Was the emergency response plan executed as designed?*

*D. What were the biggest challenges faced in dealing with the emergency?*

American Express has been very successful in executing their crisis plans.

The biggest problem American Express has faced is in finding out where everyone is during a crisis and accounting for everyone's safety. This duty falls on the Corporate Safety group, which is part of the HR department. American Express uses several different systems for employee roll-call. There is no one system that is viewed as perfect.

#### 3.0 Learning

*A. What lessons has your organization learned through*

American Express spends a great deal of time meeting post-event. They seek to

*dealing with such a situation?*

identify areas of the continuity plan that needs improvements, where there are gaps in the plan, and what areas of the plan are lagging behind.

*B. How has your organization incorporated these learning's into the emergency response plan?*

American Express aims to implement key learning's to strengthen the plan, as well as make the plan more easily executable.

*C. Is your organization now better prepared to respond to an organizational emergency?*

Definitely. The company tries very hard to make sure that lessons learned are translated into improvements of the continuity plan. The biggest shift post-9/11 has been that employees across the organization want to be involved and want to understand the process better. With employees more actively involved the company is certainly better prepared to deal with a crisis should one arise.

There will continue to be a move towards more awareness. Most large companies had not tested their continuity plans before events like 9/11 or Hurricane Katrina. These types of events have led to more small and medium sized companies following suit with crisis plans. There will be increasing focus on maintaining business operations and not merely accounting for people.

*B) Husky Injection Moulding Systems Ltd., Bolton – Ontario, Canada*

Husky Injection Moulding Systems Ltd. is a leading supplier of injection moulding equipment and services to the plastics industry with approximately 3,050 people employed worldwide. Husky has more than 40 Service and Sales offices, supporting customers in over 100 countries. Manufacturing facilities are located in Canada,

the United States, Luxembourg and China. With such a broad global reach, the company is at high risk to be affected by any number of man-made or natural disasters and must be prepared to react at both the local and corporate levels. The following findings were drawn from an interview with Anthony Hannem, former Director of Corporate Security at Husky (currently VP of Global Security & Investigations at TD Bank):

### **1.0 Planning**

*A. Does your organization have a comprehensive emergency response plan?*

Yes. As a multi-national corporation Husky has a very comprehensive Crisis Management Program.

*B. What kind of situation is the plan aimed at preventing and responding to?*

There are two tiers. Local Emergency Response teams are responsible for responding to local issues, such as a fire or other local issue that is affected only one facility. The Corporate Crisis Management team deals with business continuity issues. Issues large enough to affect the entire organization, for example a pandemic or natural disaster.

*C. How does your organization train employees in emergency response?*

American Express conducts crisis response training to all new hires. The company also conducts ongoing crisis preparation training. Fire drills are conducted every 6 months, and a full-scale building evacuation drill is held annually.

*D. Does your organization have a formal Crisis Management team?*

Husky uses a unique approach of avoiding the use of traditional training. This type of training is too structured. The different locations have different Crisis Management teams to deal with certain situations. The key is to provide awareness training through formal on-boarding presentations, as well as ongoing communications (email). The main focus at

Husky is ensuring the population is safely out of harms way. Employees are trained to evacuate and certain Crisis Management teams will deal with the actual crisis at hand.

## 2.0 Reaction

*A. Has your organization faced a large-scale emergency or crisis that threatened the safety of employees or the company's ability to carry out day-to-day operations?*

Husky faces a range of potential crises, ranging from SARS or Bird Flu, to political coups and employee illness while in foreign countries. A recent major fire required an entire facility to be evacuated and production to shut down for 48 hours.

*B. How prepared was your organization to respond to the crisis?*

Husky considers themselves to be well prepared to deal with any situations that could arise. Although there is always room for improvement.

*C. Was the emergency response plan executed as designed?*

Husky has been successful at executing emergency plans when crisis situations have arisen.

*D. What were the biggest challenges faced in dealing with the emergency?*

The randomness of crises pose the biggest challenge, as well as getting the message to people about what to do when it happens. Especially since 9/11 there has been a large focus on ensuring employees are safely evacuated. The key is trying not to waste time preparing for a very low probability situation; a company must identify the actions that are most important and incorporate them into a plan that will work in many situations.

## 3.0 Learning

*A. What lessons has your organization learned through dealing with such a situation?*

The importance of knowing where people are. Are they safe? Using "Roll-Calls." As a multi-national with employees in countries around the world this is

especially important. There is a duty to provide a safe environment. Husky views this as a corporate responsibility.

*B. How has your organization incorporated these learning's into the emergency response plan?*

Husky works in partnership with a global specialist. Husky saw this as something they could not do alone. With this partnership Husky is able to ensure their employees are safe and have the tools they need. The relationship also allows Husky to leverage valuable experience in the field of Crisis Management.

*C. Is your organization now better prepared to respond to an organizational emergency?*

Certainly. It is becoming harder to identify threats. Also Canada's image is changing around the world. Husky is a Canadian company and operates in many developing nations. With Canada's involvement in the War on Terror, many countries have changed their views on Canada being a peacekeeper. This presents many new issues around the globe. Overall, there has been an increasing amount of pressure placed on Boards of Directors as well as CEO's to ensure corporations are meeting their due-diligence in ensuring employees are safe. With this increased focus on Crisis Management, more resources are becoming available to deal with it, including both financial resources as well as commitment from Senior Management. If you are not prepared to face unforeseen events, you are in big trouble.

### C) Johnson & Johnson, New Jersey

Johnson & Johnson is the world's most comprehensive and broadly-based manufacturer of health care products, as well as related services, for the consumer, and pharmaceutical markets. Johnson & Johnson operates more than 230 companies and employs approximately 115,600 people in 57 countries throughout the world. In 1982, Johnson & Johnson's Tylenol brand faced a serious crisis when someone poisoned bottles of the pain-killer with lethal dose of cyanide, resulting in seven people's deaths. Although Johnson & Johnson was not responsible for the tampering, the company managed to survive the crisis by recalling all Tylenol on the market and introducing the first tamper-proof safety seal in the industry. The following findings were drawn from an interview with David Carey, Director of Process Excellence at Johnson & Johnson:

#### 1.0 Planning

*A. Does your organization have a comprehensive emergency response plan?*

Yes, every one of the J&J Family of Companies must have a Business Continuity Plan. The general purpose of the BCP is to recover from natural or man-made disasters as quickly as possible.

*B. What kind of situation is the plan aimed at preventing and responding to?*

- i. Weather related (e.g. hurricanes, tornados, blizzards, floods, tsunamis, etc.)
- ii. Health related (e.g. flu pandemic, bio terrorism, etc.)
- iii. Accidents (e.g. plane crashes into office or plant, major road closures preventing people from getting to work, fire, building collapse, etc.)
- iv. Major business systems interruption (e.g. order entry computer crash, telephone system crash, etc.)

*C. How does your organization train employees in emergency response?*

The organization provides every employee with a copy of the BCP summary that explains what they should do in the event of a declared emergency and when certain

*D. Does your organization have a formal Crisis Management team?*

things need to be done. For instance, certain things need to happen within the first hour, within a day, within the week, etc. The organization also provides specific, focused training for key individuals to prepare them for leadership in a crisis situation. Those people are involved in yearly tests of the response in unannounced tests of the BCP. The company uses those tests to certify adherence to corporate requirements.

The Management Board of each J&J company is the formal Crisis Management Team. Each member of the CMT has at least 1 back up, in the event of his or her absence during the crisis. Each member of the CMT (and their back up) must have a complete set of emergency response manuals in their vehicles at all times. The CMT has a clearly defined collection/meeting protocol in the event of an emergency.

#### 2.0 Reaction

*A. Has your organization faced a large-scale emergency or crisis that threatened the safety of employees or the company's ability to carry out day-to-day operations?*

The J&J Family of Companies has responded to many large-scale emergencies affecting the health and safety of large segments of the population globally. One example is the aftermath of Hurricane Katrina. The damage to the basic infrastructure in the Gulf Coast region severely impacted our ability to do business in that region.

*B. How prepared was your organization to respond to the crisis?*

J&J led in restoring the supply of healthcare products to that region within a day or two. Much of this was provided as emergency relief. Critical individuals within J&J were

	assigned on a full time basis to manage our response. J&J has not had to face a direct threat to one of our facilities, to my knowledge.
<i>C. Was the emergency response plan executed as designed?</i>	Yes.
<i>D. What were the biggest challenges faced in dealing with the emergency?</i>	Probably the biggest challenge was overcoming the impact of lack of preparedness on the part of local, state, and federal authorities.
<b>3.0 Learning</b>	
<i>A. What lessons has your organization learned through dealing with such a situation?</i>	A well designed, well-rehearsed BCP is a critical element of doing business. We must return to operations quickly because people's lives depend on receiving our products, without interruption. Testing and practice is very important to ensure it works when needed.
<i>B. How has your organization incorporated these learning's into the emergency response plan?</i>	The results of each test and actual use of the plan are reviewed to determine if opportunities for improvement exist. The BCP is updated to incorporate all lessons learned.
<i>C. Is your organization now better prepared to respond to an organizational emergency?</i>	Yes, absolutely. This is one of the very few corporate mandates within J&J. That is a reflection of the belief that this is a business-critical issue.

#### 4. DISCUSSIONS AND BEST PRACTICES

As the results of the survey indicate, American Express, Husky, and Johnson & Johnson are all organizations that place a premium on crisis preparedness, and crisis management. Each of the organizations exhibits a fervent commitment to employee safety, and business continuity that has allowed them to successfully manage serious

crises. Because the three companies are different sizes, operate in different industries, and different markets, their approaches to crisis management do differ. However, upon examination, there are several key underlying crisis management trends that emerge. Based on the analysis of the interviews and supplementary case studies, a series of recommendations and best-practices can be made to help organizations better prepare for crisis management. By implementing some of these recommendations organizations can create a competitive advantage as the benefits of effective crisis management overlap into day-to-day operations.

##### *A) Two-tier Strategy*

Each of the companies interviewed uses a two-tier approach to crisis management. The first tier at both American Express and Husky companies deals with employee safety, and conducting procedures like "roll-calls." This tier focuses primarily on HR issues. The second tier focuses on larger business continuity issues at the executive level. This may involve relocating operations, facilitating services like payroll, and communication with external partners or customers. Johnson & Johnson also uses a two-tier approach. Because the company is so diversified, there are crisis management strategies in place at the corporate and business levels. Each of the 230 Johnson & Johnson companies has its own Business Continuity Plan, designed to deal with crises most likely to affect that specific business.

##### *B) Flexibility*

All three companies viewed creating an easy-to-execute and flexible response plan is critical to an organization's ability to respond and react to a crisis. For a multi-national company, there is a higher susceptibility to face any number of crises that might occur around the world. Having a flexible crisis plan in place will improve the organization's ability to quickly and effectively react. As a small business, flexibility is important for many of the same reasons, as the nature of a crisis or emergency is generally unpredictable. The challenge is balancing flexibility against focus. A crisis plan should be general enough to encompass all of the threats most likely to affect a company yet remain flexible enough to adapt to any unforeseen circumstances. An event such as a terrorist attack or earthquake, are static events; as in, the events are single dramatic strikes. Events such as a political instability or pandemic are escalating situations where the effects may continually worsen over a period of time. Companies must be prepared to deal with either type of threat.

##### *C) Training*

Each of the companies uses on-boarding training for new hires to introduce safety and emergency information.

In the event of a crisis, employees should know where the nearest exit is, how to evacuate, and what procedure is used for role-calling or employee check-in. Continuous crisis training through information sessions, web-based communications, and random safety drills ensure that employees remain committed to safety and prepared to react in a crisis situation. The overall goal of employee training is to ensure that employees are safely removed from any dangerous situations. With the general working population safe, the company can then focus on the business continuity issues at hand.

#### *D) Communication*

During a crisis, an effective communication system is crucial. A “roll-call” or “check-in” plan allows for HR departments to locate employees, and ensure they are safe. Major emergencies can displace entire companies and employees from their regular work locations. In a remote work environment effective communication is vital to keep people connected, and business functions operating. After 9/11, American Express was able to successfully relocate their entire New York headquarters to temporary locations in the surrounding area for approximately eight months while recovery efforts were underway.

#### *E) Corporate Commitment*

In the post-9/11 era there has been increasing commitment from CEOs and Directors to security and crisis preparedness. Potential crises are becoming increasingly difficult to identify, and in response organizations are dedicating more resources, financial and human capital, to deal with them. There has been pressure at the executive level to make certain that organizations are meeting their due-diligence in creating safe working environments and providing adequate training to employees. As HR departments are receiving more resources that can more effectively deal with crises, should they arise.

#### *F) Other Considerations*

In recent years, global stability has been disrupted, and global perceptions have changed. In the era of mass-globalization these changes can have a serious impact on organizations. During the “War on Terror,” many developing countries have become opposed to Western governments and business. For a North American or European company operating in Asia or the Middle East this can pose new challenges. Western businesses have increasingly become targets in foreign markets. Companies must be aware of the political and social environments in which they operate. A political coup may replace a business-friendly government with a hostile one. Social unrest may make Western employees targets for kidnapping. These unfortunate developments are a reality and must be acknowledged by companies operating in foreign environments.

## 5. CONCLUSION

In today’s world an organization needs to be well prepared to deal with any number of unforeseen events that could threaten their employees, or their ability to operate. Based on the analysis of the interviews, a series of recommendations and best-practices can be made to help organizations better prepare for crisis management. By implementing some of these recommendations’ organizations can create a competitive advantage as the benefits of effective crisis management overlap into day-to-day operations.

American Express, Husky Injection Moulding, and Johnson & Johnson are all companies dedicated to crisis management, and exhibit some of the best-practices for dealing with disasters. Organizations should attempt to incorporate these steps into their crisis management plan:

- i. Two-tier crisis plan: The first-tier deals with employee safety and the second tier on business continuity plan. There needs to be specific focus on employee safety, while simultaneously focusing on business continuity issues.
- ii. On-going safety and crisis training: On-board training of employees and new hires to equip them with safety and emergency information in the event of a crisis or emergency.
- iii. Ensure the crisis plan is designed around the concept of flexibility: The nature of crisis or emergency is generally unpredictable. The plan should cater for specific threats that a company could potentially face while being general enough to adapt to any unforeseen challenges.
- iv. Conduct on-going crisis plan analysis and ensure the crisis plan is up-to-date: Periodic review of the plan is essential to stay up to date with global and political changes.
- v. Communication is often the biggest challenge during a disaster: Coordination of employees and sharing of information during a crisis is of utmost importance.

As the role of Human Resource management has evolved over the years, HR today must play a larger role in crisis management. With the global landscape continuing to transform, new and unidentified threats will emerge. Now is the time for organizations to take proactive measures to prepare for crises.

## REFERENCES

- [1] Beamon, B.M., Kotleba, S.A..2006. Inventory modelling for complex emergencies in humanitarian relief operations, *Int. J. Logist.: Res. Appl.* 9 (1) 1–18.
- [2] Ben-Tal, A., Do Chung, B., Mandala, S.R., Yao, T. 2011. Robust optimization for emergency logistics planning: risk mitigation in humanitarian relief supply chains, *Transp. Res. Part B: Methodol.* 45 (8) 1177–1189.

- [3] Carey, D. 2006. Human Resource Management and Crisis Response Survey. Director of Process Excellence. Johnson & Johnson. New Jersey, United States.
- [4] Carter, W.N. 1992. Disaster Management: A Disaster Manager's Handbook, Asian Development Bank, Book, Manila, Philipines..
- [5] Costello, R. 2006. Human Resource Management and Crisis Response Survey. Corporate Safety Manager. American Express Corp. New York, United States.
- [6] Cooper, T. 2015. Empirical Research on Inter-organizational Relations within a National Disaster Management Network in the Caribbean. Springer Science and Business Media, 15(1), 1-16.
- [7] Hannem, A. 2006. Human Resource Management and Crisis Response Survey. Director of Corporate Security. Husky Injection Moulding Systems, Ltd. Bolton, Ontario, Canada.
- [8] Hatwell, H. 2014. Disaster Management and Emergency Planning. Perspectives in Public Health, Sage Publications Ltd, 134(3).
- [9] Kapucu, N. 2008. Culture of preparedness: household disaster preparedness, *Disaster Prev. Manag.* 17 (4) 526–535.
- [10] Leonard, B. 2006. HR Pro Comes to the Rescue in Louisiana, *HR Magazine*, 51(2)
- [11] Loh, B. 2005. Disaster risk management in Southeast Asia: a developmental approach, *Asean Econ. Bull.* 22 (2) 229–239.
- [12] Nikbakht, E., Zanjirani Farahani, R. 2011. Logistics Operations and Management, Logistics Operations and Management. Elsevier, London; Waltham, Mass.
- [13] O'Brien, G., O'Keefe, P., Rose, J., Wisner, B. 2006. Climate change and disaster management, *Disasters* 30 (1), 64–80.
- [14] Palliyaguru, R., Amarasingha, D., Baldry, D. 2014. Constructing a holistic approach to disaster risk reduction: the significance of focusing on vulnerability reduction, *Disasters* 38 (1) 45–61
- [15] Palliyaguru, R., Amarasingha, D. 2008. Managing disaster risks through quality infrastructure and vice versa: post-disaster infrastructure reconstruction practices, *Struct. Surv.* 26 (5) 426–434.
- [16] Perry, M. 2007. Natural Disaster Management Planning, *International Journal of Physical Distribution and Logistics Management*, 37(5), 409-433.
- [17] Rolland, E., Patterson, R., Ward, K., & Dodin, B. 2010. Decision Support for Disaster Management, *Operations Management Research*, 3(2), 68-79.
- [18] Sinha, A., Pal, D.K., Kasar, P.K., Tiwari, R., Sharma, A. 2008. Knowledge, attitude and practice of disaster preparedness and mitigation among medical students, *Disaster Prev. Manag.* 17 (4) 503–507.
- [19] Tomasini, R.M., Van Wassenhove, L.N. 2009. Humanitarian Logistics, PalgraveMacmillan, Hounds Mills, Basingstoke; New York, NY, 2009.

### **Exhibit 1: Human Resource Management and Crisis Response Survey**

In the aftermath of the terrorist attacks on 9/11, SARS, the threats of pandemics, and the destruction witnessed in the wake of Hurricane Katrina, an organization's ability to plan for, and respond to unforeseen emergencies has become a very important topic. It is often the responsibility of the Human Resource department to ensure that the employees are working in a safe environment and have adequate training in how to respond should a crisis arise. In the event that a disaster does occur it will also fall on the Human Resources department to

locate employees, ensure they are safe, and arrange for counselling and recovery programs. There may be situations in which a business cannot access their headquarters and must operate from a new location, or remotely. In this case the HR department may be responsible for facilitating the transfer.

Ensuring that employees are safe, and business can continue operating, during and after such an event, can be crucial to the survival of an organization. The following questions are designed to examine how different companies plan for, react to, and learn from situations that threaten the entire business. It is understood that this topic is emotionally charged and can relate to an organization's security, thus we do not ask for any information on your organization's security protocols or any information that would be deemed proprietary.

Thank you for your time.

#### **Planning**

- 1. Does your organization have a comprehensive emergency response plan?
- 2. What kind of situations is the plan aimed at preventing and responding to?
- 3. How does your organization train employees in emergency response?
- 4. Does your organization have a formal Crisis Management team?

#### **Reaction**

- 1. Has your organization faced a large-scale emergency or crisis that threatened the safety of employees or the company's ability to carry out day-to-day operations?
- 2. How prepared was your organization to respond to the crisis?
- 3. Was the emergency response plan executed as designed?
- 4. What were the biggest challenges faced in dealing with the emergency?

#### **Learning**

- 1. What lessons has your organization learned through dealing with such a situation?
- 2. How has your organization incorporated this learning's into the emergency response plan?
- 3. Is your organization now better prepared to respond to an organizational emergency?